

Amendment to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

Claim 1 (currently amended): A converter circuit ~~having~~ comprising:

a switching transistor ~~(MOS1)~~₁; and

a drive circuit for driving the switching transistor ~~(MOS1)~~ which is designed to switch the switching transistor ~~(MOS1)~~ in response to a voltage or current value, ~~characterized in that~~ wherein the drive circuit comprises two series-connected threshold value components ~~(K1, K2, K1', K2')~~ which respond to a respective input signal as a function of ~~[[the]]~~ a threshold value with an output signal transition, in that an input of a first ~~one of the~~ threshold value components ~~(K1, K1')~~ is connected ~~up~~ such that it can detect the voltage or current value from the output of the switching transistor, and the output of the first threshold value component ~~(K1, K1')~~ drives an input of ~~[[the]]~~ a second threshold value component ~~(K2, K2')~~, and the output of the second threshold value component ~~(K2, K2')~~ drives the control electrode of the switching transistor ~~(MOS1)~~; and

wherein the converter circuit comprises a single-feedback circuit via the threshold value components.

Claim 2 (currently amended): The converter circuit ~~as claimed in~~ of claim 1, ~~in which~~ wherein the drive circuit is designed to respond to a voltage or current value in the converter circuit.

Claim 3 (currently amended): The converter circuit ~~as claimed in~~ of claim 2, ~~in which~~ wherein the drive circuit is designed to respond to a voltage or current value of the switching transistor ~~(MOS1)~~.

Claim 4 (currently amended): The converter circuit ~~as claimed in~~ of claim 3, ~~which contains~~ wherein the converter is a class E converter.

Claim 5 (canceled).

Claim 6 (currently amended): The converter circuit ~~as claimed in~~ of claim 1, ~~in which~~ wherein at least one of the threshold value components (~~K1, K2, K1', K2'~~) is a differential amplifier; ~~preferably both of the threshold value components (K1, K2, K1', K2') is/are differential amplifiers.~~

Claim 7 (currently amended): The converter circuit ~~as claimed in~~ of claim 6, ~~in which~~ wherein the differential amplifier(s) (~~K1, K2, K1', K2'~~) is/are (a) comparator(s).

Claim 8 (currently amended): The converter circuit ~~as claimed in~~ of claim 1, wherein the converter circuit further comprises ~~having~~ a delay circuit (~~R2, C2, D2~~) between the output of the first threshold value component (~~K1, K1'~~) and the input of the second (~~K2, K2'~~) threshold value component, ~~which said~~ delay circuit (~~R2, C2, D2~~) ~~passes~~ passing on output signals[[,]] representing a first switching state of the switching transistor (~~MOS1~~), from the output of the first threshold value component (~~K1, K1'~~) to the input of the second threshold value component (~~K2, K2'~~) ~~only~~ once a fixed time has elapsed, ~~but while~~ allows allowing output signals representing the other, second switching state to pass with less of a time delay.

Claim 9 (currently amended): The converter circuit ~~as claimed in~~ of claim 8, ~~in which~~ wherein the delay circuit (~~R2, C2, D2~~) ~~has~~ comprises a capacitor (~~C2~~), and wherein the output of the first threshold value component (~~K1, K1'~~) is connected to the capacitor at a high impedance (~~D2, K1'~~) when there is a transition from an output signal representing the second switching state to an output signal representing the first switching state and is connected to the capacitor at a lower impedance (~~D2, K1'~~) when there is a transition from an output signal representing the first switching state to an output signal representing the second switching state.

Claim 10 (currently amended): The converter circuit ~~as claimed in~~ of claim 9, ~~in which~~ wherein the first threshold value component (~~K1~~) has a push-pull output, and the high impedance is

generated by a rectifier diode (~~D2~~) which is off between the output of the first threshold value component (~~K1~~) and the capacitor (~~C2~~).

Claim 11 (currently amended): The converter circuit ~~as claimed in~~ of claim 9, ~~in which~~ wherein the first threshold value component (~~K1~~) has an open-collector or open-drain output.

Claim 12 (currently amended): The converter circuit ~~as claimed in~~ of claim 9, ~~in which~~ wherein the second threshold value component (~~K2, K2'~~) is a comparator, and a reference value of the comparator (~~K2, K2'~~) can be adjusted in order to be able to ~~adjust~~ vary the fixed time for passing on the output signal representing the first switching state of the switching transistor (~~MOS1~~).

Claim 13 (currently amended): The converter circuit ~~as claimed in~~ of claim 1, ~~in which~~ further comprising a driver circuit (~~TR~~) is stage provided between the output of the second threshold value component (~~K2, K2'~~) and the control electrode of the switching transistor (~~MOS1~~).

Claim 14 (currently amended): The converter circuit of claim 1, wherein the converter circuit is a circuit within an [[An]] electronic ballast for a light-emitting device (~~R_Load~~), ~~in particular a lamp, having the converter circuit as claimed in claim 1.~~

Claim 15 (currently amended): The converter circuit of claim 14, wherein the converter circuit within the electronic ballast ~~as claimed in claim 14, which is designed to supply~~ supplies power to a dielectric barrier discharge lamp (~~R_Load~~).

Claim 16 (canceled).

Claim 17 (currently amended): A method for operating [[the]] a converter circuit comprising ~~as claimed in claim 1, in which the:~~

applying a current or voltage value is supplied to the drive circuit and is applied there to [[the]] an input of [[the]] a first threshold value component of said converter circuit (~~K1, K1'~~), said first threshold value component having a threshold value;

[[an]] outputting a first signal from the first threshold value component, which responds
said first signal corresponding to said a value of the current or voltage value applied to the first
threshold value component as a function of the threshold value, from the first threshold value
component (K1, K1') is applied;

applying the first signal to [[the]] an input of [[the]] a second threshold value component
of said converter circuit (K2, K2'), said second threshold value component having the threshold
value and leading to a control electrode driving a switching transistor;

an output outputting a second signal from the second threshold value component to the
control electrode driving the switching transistor, which responds to said second signal
corresponding to the output first signal from the first threshold value component (K1, K1') as a
function of the threshold value, from the second threshold value component (K2, K2') leads to
the control electrode driving the switching transistor (MOS1).

Claim 18 (currently amended): [[A]] The method of claim 17, wherein said converter circuit is a
circuit within an electronic ballast for operating a light-emitting device (R_Load) using the
electronic ballast as claimed in claim 14.

Claim 19 (currently amended): An illumination system comprising a lamp (R_Load) and the
electronic ballast as claimed in claim 15;

a lamp;

an electronic ballast for the lamp, said electronic ballast including a converter circuit
comprising:

a switching transistor; and

a drive circuit for driving the switching transistor which is designed to switch the
switching transistor in response to a voltage or current value, wherein the drive circuit
comprises two series-connected threshold value components which respond to a
respective input signal as a function of the threshold value with an output signal
transition, in that an input of a first threshold value component is connected such that it
can detect the voltage or current value from the output of the switching transistor, and the
output of the first threshold value component drives an input of a second threshold value

component, and the output of the second threshold value component drives a control electrode of the switching transistor.